Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1-65. (Canceled)

Claim 66. (Currently amended) A device for detecting an interaction between an analyte and a first recognition moiety, said device comprising:

a first substrate having a first surface;

a second substrate having a second surface, said first substrate and said second substrate being aligned such that said first surface ~~of said first substrate~~ opposes said second surface ~~of said second substrate~~;

a first organic layer attached to said first surface ~~of said first substrate~~, wherein said first organic layer comprises a first recognition moiety which is bound to said first organic layer and interacts with said analyte; and

a mesogenic layer between said first substrate and said second substrate, said mesogenic layer comprising a plurality of mesogens, wherein at least a portion of said plurality of mesogens undergo a detectable switch in orientation upon interaction between said first recognition moiety and said analyte, whereby said interaction ~~presence~~ of said analyte is detected.

Claim 67. (Currently amended) The device according to claim **66**, wherein said analyte is a member selected from the group consisting of acids, bases, avidin, organic ions, inorganic ions, pharmaceuticals, herbicides, pesticides, chemical warfare agents, noxious gases, biomolecules and combinations thereof.

Claim 68. (Original) The device according to claim **66**, wherein said interaction is a member selected from the group consisting of covalent bonding, ionic bonding, hydrogen bonding, van der Waals interactions, repulsive electronic interactions, attractive

electronic interactions, hydrophobic interactions, hydrophilic interactions and combinations thereof.

Claim 69. (Withdrawn) The device according to claim **67**, wherein said interaction is an ionic interaction and the analyte is a member selected from the group consisting of acids, bases, metal ions and metal ion binding ligands.

Claim 70. (Withdrawn) The device according to claim **67**, wherein said analyte is a nucleic acid and said interaction is a hydrogen bonding interaction between said nucleic acid and a nucleic acid strand having an at least partially complementary sequence.

Claim 71. (Withdrawn) The device according to claim **67**, wherein said interaction is between a protein and a small molecule.

Claim 72. (Withdrawn) The device according to claim **71**, wherein said interaction is between an enzyme and a substrate for said enzyme.

Claim 73. (Withdrawn) The device according to claim **71**, wherein said interaction is between an antibody and a complementary antigen.

Claim 74. (Withdrawn) The device according to claim **71**, wherein said interaction is between biotin and avidin.

Claim 75. (Withdrawn) The device according to claim **71**, wherein said interaction is between biotin and an antibiotin antibody.

Claim 76. (Withdrawn) A method for detecting an analyte, comprising:

contacting with said analyte a recognition moiety for said analyte, wherein said contacting causes at least a portion of a plurality of mesogens proximate to said recognition moiety to detectably switch from a first orientation to a second orientation upon contacting said analyte with said recognition moiety; and

detecting said second orientation of said at least a portion of said plurality of mesogens, whereby said analyte is detected.

Claim 77. (Withdrawn) The method according to claim **76**, wherein said analyte is a member selected from the group consisting of vapors, gases and liquids.

Claim 78. (Withdrawn) The method according to claim **77**, wherein said vapor is a member selected from the group consisting of vapors of a single compound and vapors of a mixture of compounds.

Claim 79. (Withdrawn) The method of claim **77**, wherein said gas is a member selected from the group consisting of a single gaseous compound and mixtures of gaseous compounds.

Claim 80. (Withdrawn) The method of claim **77**, wherein said liquid is a member selected from the group consisting of a single liquid compound, mixtures of liquid compounds, solutions of solid compounds and solutions of gaseous compounds.

Claim 81. (Withdrawn) The method according to claim **76**, wherein said recognition moiety comprises a member selected from the group consisting of metal ions, metal-binding ligands, metal-ligand complexes, nucleic acids, peptides, cyclodextrins, acids, bases, antibodies, enzymes and combinations thereof.

Claim 82. (Withdrawn) The method according to claim **76**, wherein from about 10 to about 10^8 mesogens undergo said switching for each molecule of analyte interacting with said analyte.

Claim 83. (Withdrawn) The method according to claim **76**, wherein from about 10^3 to about 10^6 mesogens undergo said switching.

Claim 84. (Withdrawn) The method according to claim **76**, wherein said first orientation is a member selected from the group consisting of uniform, twisted, isotropic and nematic and said second orientation is a member selected from the group consisting of uniform, twisted, isotropic and nematic, with the proviso that said first orientation and said second orientation are different orientations.

Claim 85. (Withdrawn) The method according to claim **84**, wherein said detecting is achieved by a method selected from the group consisting of visual observation, microscopy, spectrometry, electronic techniques and combinations thereof.

Claim 86. (Withdrawn) The method according to claim **84**, wherein said visual observation detects a change in reflectance, transmission, absorbance, dispersion, diffraction, polarization and combinations thereof, of light impinging on said plurality of mesogens.

Claim 87. (Withdrawn) The method according to claim **85**, wherein said microscopy is a member selected from the group consisting of light microscopy, polarized light microscopy, atomic force microscopy, scanning tunneling microscopy and combinations thereof.

Claim 88. (Withdrawn) The method according to claim **85**, wherein said spectroscopic technique is a member selected from the group consisting of infrared spectroscopy, Raman spectroscopy, x-ray spectroscopy, visible light spectroscopy, ultraviolet spectroscopy and combinations thereof.

Claim 89. (Withdrawn) The method according to claim **85**, wherein said electronic technique is a member selected from the group consisting of surface plasmon resonance, ellipsometry, impedometric methods and combinations thereof.

Claims 90.-108. (Canceled)

Claim 109. (Currently amended) A device comprising:

a first substrate having a first surface;

a second substrate having a second surface, said first substrate and said second substrate being aligned such that said first surface ~~of said first substrate~~ opposes said second surface ~~of said second substrate~~;

a first organic layer attached to said first surface ~~of said first substrate~~, wherein said first organic layer comprises a first recognition moiety which is bound to

said first organic layer, interacts with said analyte, and is selected from an amine, an antibody, a nucleic acid, biotin, a drug moiety, a chelating agent, a crown ether, and a cyclodextrin; and

a mesogenic layer between said first substrate and said second substrate, said mesogenic layer comprising a plurality of mesogenic compounds.

Claim 110. (Currently amended) The device according to claim **109**, further comprising ~~an opening allowing communication between said interior portion of said device and an analyte access to said recognition moiety.~~ an interior portion defined as the area between said first surface and said second surface, wherein said interior portion allows communication between said analyte and said recognition moiety.

Claim 111. (Previously presented) The device according to claim **109**, wherein said organic layer is a rubbed polymer.

Claim 112. (Canceled)

Claim 113. (Currently amended) The device according to claim [[**112**]] **109**, wherein said ~~biopolymer~~ recognition moiety further comprises a biomolecule comprising a member selected from a polysaccharide and a combination of a polysaccharide and a protein. ~~is a member selected from the group consisting of proteins, a polysaccharides and combinations thereof.~~

Claims 114.-117. (Canceled)

Claim 118. (New) A device for detecting an interaction between an analyte and a first or second recognition moiety, said device comprising:

a first substrate having a first surface;

a first organic layer attached to said first surface wherein said first organic layer comprises a first recognition moiety which is bound to said first organic layer, interacts with said analyte, and is selected from an amine, an antibody, a nucleic acid, biotin, a drug moiety, a chelating agent, a crown ether, and a cyclodextrin; and

a second substrate having a second surface, said first substrate and said second substrate being aligned such that said first surface opposes said second surface;

a second organic layer attached to said first surface, wherein said scond organic layer comprises a second recognition moiety, bound to said first organic layer, which interacts with said analyte, wherein said second recognition moiety is selected from an amine, a carboxylic acid, a biomolecule, a drug moiety, a chelating agent, a crown ether, and a cyclodextrin; and

a mesogenic layer between said first substrate and said second substrate, said mesogenic layer comprising a plurality of mesogens, wherein at least a portion of said plurality of mesogens undergo a detectable switch in orientation upon interaction between said first recognition moiety and said analyte, whereby said analyte is detected.

Claim 119. (New) The device according to claim **118**, wherein said analyte is a member selected from the group consisting of acids, bases, avidin, organic ions, inorganic ions, pharmaceuticals, herbicides, pesticides, chemical warfare agents, noxious gases, biomolecules and combinations thereof.

Claim 120. (New) The device according to claim **118**, wherein said interaction is a member selected from the group consisting of covalent bonding, ionic bonding, hydrogen bonding, van der Waals interactions, repulsive electronic interactions, attractive electronic interactions, hydrophobic interactions, hydrophilic interactions and combinations thereof.

Claim 121. (New) The device according to claim **118**, wherein said first organic layer comprises a self-assembled organosulfur or organosilane monolayer bound to said first surface; and wherein said first recognition moiety is bound to said self-assembled monolayer.

Claim 122. (New) The device according to claim **118**, wherein said second organic layer comprises a self-assembled organosulfur or organosilane monolayer bound to said

second substrate; and wherein said second recognition moiety is bound to said self-assembled monolayer.

Claim 123. (New) The device according to claim **66**, wherein said first organic layer comprises a self-assembled organosulfur or organosilane monolayer bound to said first surface; and wherein said first recognition moiety is bound to said self-assembled monolayer.

Claim 124. (New) The device according to claim **109**, wherein said first organic layer comprises a self-assembled organosulfur or organosilane monolayer bound to said first surface; and wherein said first recognition moiety is bound to said self-assembled monolayer.

Claim 125. (New) The device according to claim **66**, wherein said first recognition moiety is selected from an amine, an antibody, a nucleic acid, biotin, a drug moiety, a chelating agent, a crown ether, and a cyclodextrin.